

a valve, provided on the conduit, for allowing and blocking the fluid communication between the cylinder and the nasal cannula;

A<sup>1</sup>  
a controller for controlling the operation of the valve in synchronization with respiration of a patient based on changes in pressure detected by the pressure sensor, the controller comparing respiratory frequency with a threshold to increase volume of the oxygen therapeutic gas for each respiration in step when the respiratory frequency is larger than the threshold.

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### **REMARKS**

Claims 1 and 3-6 are pending in the application. By this Amendment, claim 2 is canceled without prejudice or disclaimer and claim 1 is amended.

Claims 1-6 are rejected under 35 U.S.C. 112, second paragraph. The Office Action alleges that there is insufficient antecedent basis for the features of a "the cylinder", "the nasal cannula", "the conduit", "the valve", and "the pressure sensor". It is respectfully submitted that each of these features is introduced in claim 1 by the indefinite article "a" in the body of claim 1. For the feature "the oxygen therapeutic gas", "an oxygen therapeutic gas" is introduced by the indefinite article "an" in the preamble of claim 1. It is respectfully submitted that all of these features have appropriate antecedent basis. Withdrawal of the rejection is respectfully requested.

Claims 1-6 are rejected under 35 U.S.C. 102 (b) as anticipated by Kloeppel (U.S. Patent No. 5,865,174). The rejection is respectfully traversed.

Kloeppel teaches a supplemental oxygen delivery apparatus that includes a sensing passage, a delivery passage, a valve, a pressure sensor, a controller and a manually actuated switch. The sensing passage is fluidly connectable to a nasal passage of a patient. The delivery passage is fluidly connectable to the nasal passage of the patient. The valve is fluidly connectable to an oxygen supply and fluidly connectable to the delivery passage. The valve includes a valve inlet and a valve outlet that are not in fluid communication in a first valve condition and are in fluid communication in a second valve condition. The pressure sensor is in fluid communication with the sensing passage and senses a sensed pressure in the sensing

passage. The controller operably connected to the pressure sensor and the valve causes the valve to change from the first condition to the second condition responsive to the sensed pressure reaching a threshold level. The manually actuated switch enables the valve to change between the first and second valve conditions or causes the valve to be continuously in the second condition.

Claim 1 is directed to an apparatus for supplying an oxygen therapeutic gas and includes a cylinder, a nasal cannula, a conduit, a pressure sensor, a valve and a controller. Claim 1 recites that the controller controls the operation of the valve in synchronization with respiration of a patient based on changes in the pressure detected by the pressure sensor. Claim 1 further recites that the controller compares respiratory frequency with a threshold to increase volume of the oxygen therapeutic gas for each respiration in step when the respirator frequency is larger than the threshold.

It is respectfully submitted that the rejection is improper because the applied art fails to teach each element of claim 1. Specifically, the applied art fails to teach a controller that compares respiratory frequency with a threshold in order to increase volume of an oxygen therapeutic gas for each respiration in step when the respirator frequency is larger than the threshold. Therefore, it is respectfully submitted that claim 1 is allowable over the applied art.

Claims 3-6 depend from claim 1 and include all of the features of claim 1. Thus, the dependent claims are allowable at least for the reasons claim 1 is allowable as well as for the features they recite.

Claim 2 is canceled and therefore the rejection as applied to claim 2 is now moot.

Withdrawal of the rejection is respectfully requested.

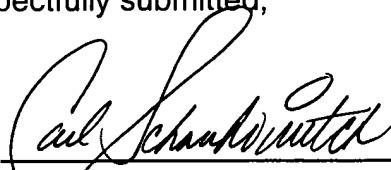
In view of the foregoing, reconsideration of the application and allowance of the pending claims are respectfully requested. Should the Examiner believe anything further is desirable in order to place the application in even better condition for allowance, the Examiner is invited to contact Applicants' representative at the telephone number listed below.

Should additional fees be necessary in connection with the filing of this paper or if a Petition for Extension of Time is required for timely acceptance of the same, the Commissioner is hereby authorized to charge Deposit Account No. 18-0013 for any such fees and Applicant(s) hereby petition for such extension of time.

Respectfully submitted,

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Enclosure(s):      Appendix I (Marked-up Version of Amended Claims)  
                              Petition for Extension of Time (one month)

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## **APPENDIX I**

### **(MARKED-UP VERSION OF AMENDED CLAIMS)**

1. (Amended) An apparatus for supplying as oxygen therapeutic gas, comprising:

a cylinder for containing a pressurized oxygen therapeutic gas;

a nasal cannula, adapted to be introduced into a nasal passage of a patient;

a conduit extending between the cylinder and the nasal cannula for directing the oxygen therapeutic gas to the nasal cannula from the cylinder;

a pressure sensor, provided on the conduit, for detecting the pressure in the conduit;

a valve, provided on the conduit, for allowing and blocking the fluid communication between the cylinder and the nasal cannula;

a controller for controlling the operation of the valve in synchronization with the respiration of a patient based on the changes in the pressure detected by the pressure sensor, ~~the volume of the oxygen therapeutic gas passing through the valve for each respiration being increased, compared with a normal respiration condition, when the respiratory frequency increases~~ the controller comparing respiratory frequency with a threshold to increase volume of the oxygen therapeutic gas for each respiration in step when the respiratory frequency is larger than the threshold.